REMARKS

By this Amendment, Applicants have amended claims 2, 19-21, and 23-25; and added new claims 38-62. No new matter has been added. Claims 9-18 and 26-37 have been withdrawn from consideration as directed to claims non-elected without traverse. Thus, claims 1-8, 19-25, and 38-62 are pending on the merits.

In the Office Action, the Examiner acknowledged Applicants' election without traverse to prosecute Species A, Figures 2-26, claims 1-8 and 19-25, and withdrew from further consideration claims 9-18 and 26-37 as being directed to non-elected species of invention; rejected claims 19-25 under 35 U.S.C. § 102(e) as being anticipated by Bahl (U.S. Patent No. 6,072,160); and allowed claims 1-8.

As an initial matter, Applicants greatly appreciate the Examiner's indication that claims 1-8 are allowed. Applicants consider the Examiner's statement of reasons for allowance to be merely one possible reason for the allowance of claims 1-8, not the sole reason.

With respect to the rejection of claims 19-25 under 35 U.S.C. § 102(e) as being anticipated by Bahl, Applicants have amended claims 19-21 and 23-25, thereby obviating that rejection. To the extent, however, that the Examiner may consider asserting a rejection of those claims based on the Bahl reference, Applicants respectfully submit that the Bahl reference cannot anticipate Applicants' claims 19-21 and 23-25, as amended, because the Bahl reference does not disclose all of the subject matter recited in those claims. See M.P.E.P. § 2131.

Applicants' invention as recited in amended independent claim 19 is directed to a lamp adapted to be used as a heat source for heating an object to be heated. The lamp

includes an illuminant generating a light, and an inner surface covering the illuminant so as to reflect the light generated by the illuminant, wherein the inner surface has a curvature so as to reflect the light generated by the illuminant in a direction toward the object.

In contrast to Applicants' invention as recited in amended independent claim 19, the Bahl reference discloses a rapid thermal heating system 38, which includes a plurality of radiant energy sources 39 to irradiate a predetermined area of a substrate 81. See, e.g., Abstract; Fig. 1. The radiant energy sources 39 are associated with reflectors 159, wherein portions of radiated areas of adjacent radiant energy sources 39 overlap. See, e.g., Abstract; Fig. 2. The reflectors 159 include a flared specular surface 200/300 at their light emitting end or outlet. See, e.g., Abstract; Figs. 5a-5c, 6a, and 6b. The flared specular surface 200/300 reflects radiant energy toward the substrate 81. Id. The Bahl reference, however, does not disclose at least a lamp including an illuminant generating a light, wherein the inner surface of the illuminant has a curvature so as to reflect the light generated by the illuminant in a direction toward the object. Rather, the Bahl specular surface 200/300 has no curvature.

In the rejection statement, the Examiner has interpreted the Bahl reference as disclosing "a lamp for use as a heat source comprising an illuminant/filament coil (161; 350), a light emitting part 162 covering the illuminant, [and] a reflective part (160, 300). . . ." Office Action at 2. As outlined above, however, the Bahl flared specular surface 200/300 has no curvature. Therefore, the Bahl reference does not

disclose all of the subject matter recited in amended independent claim 19 and cannot anticipate that claim.

Applicants' invention as recited in amended independent claim 25 is directed to a heat treatment apparatus for applying a heat treatment to an object to be processed. The heat treatment apparatus includes a support member on which the object to be processed is placed, and a plurality of lamps located above the support member for heating the object to be processed. Each of the lamps includes an illuminant generating a light, an inner surface covering the illuminant so as to reflect the light generated by the illuminant, and a projection face through which the light generated by the illuminant and the light reflected by the inner surface are projected, wherein the inner surface of the light-emitting part has a curvature so as to reflect the light generated by the illuminant in a direction toward the projection surface.

As outlined above with respect to claim 19, the Bahl reference does not disclose at least a lamp including an illuminant generating a light, wherein the inner surface of the illuminant has a curvature so as to reflect the light generated by the illuminant in a direction toward the object. Rather, the Bahl specular surface 200/300 has no curvature. Therefore, the Bahl reference does not disclose all of the subject matter recited in amended independent claim 25 and cannot anticipate that claim.

Applicants' invention as recited in new independent claim 43 is directed to a lamp adapted to be used as a heat source for heating an object to be heated. The lamp includes an illuminant generating a light, and a reflective part reflecting the light generated by the illuminant, wherein the reflective part has a face so as to emit the light generated by the illuminant toward the object by one time reflection.

The Bahl reference does not disclose or suggest at least a lamp adapted to be used as a heat source for heating an object to be heated, wherein a reflective part has a face so as to emit the light generated by an illuminant toward the object by one time reflection. On the contrary, the Bahl discloses a specular surface 200/300 that has no curvature. Specular surfaces such as those like Bahl's result in numerous reflections prior to exiting toward an object.

For example, Applicants' Fig. 1 provides a schematic depiction of an arrangement, which is described in detail on pages 5 and 6 of Applicants' specification. Such arrangements may result in a substantial loss of energy. On the other hand, Applicants' Figs. 12 and 13 schematically depict exemplary embodiments of Applicants' invention, wherein the reflective part has a face so as to emit the light generated by the illuminant toward the object by one time reflection. Accordingly, the Bahl reference fails to disclose all of the subject matter recited in Applicants' new independent claim 43. Therefore, new independent claim 43 should be allowable.

Applicants' invention as recited in new independent claim 49 is directed to a heat treatment apparatus for applying a heat treatment to an object to be processed. The heat treatment apparatus includes a support member on which the object to be processed is placed, and a plurality of lamps located above the support member for heating the object to be processed. Each of the lamps includes an illuminant generating a light, a reflective part reflecting the light generated by the illuminant, and a projection face facing the illuminant so as to project the light emitted from the illuminant and the light reflected by the reflective part, wherein the reflective part has a face so as to emit the light generated by the illuminant toward the projection face by one time reflection.

For at least reasons similar to those outlined above with respect to new independent claim 43, new independent claim 49 should be allowable.

Applicants' invention as recited in new independent claim 54 is directed to a lamp adapted to be used as a heat source for heating an object to be heated. The lamp includes a light-emitting part, and an electrode part configured and arranged to be supplied with an electric power and connected to the light-emitting part via a middle part located between the light-emitting part and the electrode part. The light-emitting part includes an illuminant generating a light, the illuminant being connected to the electrode part, a reflective part having a face so as to emit the light generated by the illuminant substantially in the same direction by one time reflection, and a projection face facing the illuminant so as to project the light emitted from the illuminant and the light reflected by the reflective part toward outside.

For at least reasons similar to those outlined above with respect to new independent claims 43 and 49, new independent claim 54 should be allowable.

Accordingly, Applicants respectfully submit that independent claims 1, 8, 19, 25, 43, 49, and 54 are allowable. Furthermore, Applicants submit that claims 2-7, 20-24, 38-42, 44-48, 50-53, and 55-62 are allowable by virtue of their dependency on their corresponding independent claims 1, 8, 19, 25, 43, 49, and 54, as well by their additional recitations of novel and non-obvious subject matter. Therefore claims 1-8, 19-25, and 38-62 should be allowable.

Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims.

If the Examiner believes that a telephone conversation might advance prosecution, the Examiner is cordially invited to call Applicants' representative at 571-203-2739.

Applicants respectfully submit that the Office Action contains numerous assertions concerning the related art and the claims. Regardless of whether those assertions are specifically addressed herein, Applicants decline to automatically subscribe to them.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

Dated: March 4, 2004

By: David W. Hill
David W. Hill
Reg. No. 28,220